

- (b) said sonic compression wave impulses, superposed on said shear induced viscoelastic material, modify non-metallic material substructure morphology; and**
- (c) said substructure morphology modification be applied to selectively alter mechanical and physical properties of said non-metallic workpiece.**

Amendments to the Abstract of the Disclosure

- Please amend the **third** sentence in paragraph **0035** as follows:
Waveguides and resonators may be applied for impedance matching and coincidence of wave modes in the workpiece.

Amendments to the Drawings:

Figures **1** through **3** in the application document are **unchanged**. The attached **new figure 4** is added to exhibit the feature of **resonance**.

REMARKS/ ARGUMENTS

Specification Amendments

Paragraph [0003] amendments qualify lens characteristics to encompass both transmitting and reflecting features. Paragraph [0004] amendments include the principle of resonance and editorial clarification of context. Paragraph [0005] amendments are editorial clarification of context. The paragraph [0009] addition of the word “arc” specifies the referenced welding process. Paragraph [0014] amendments incorporate the principle of resonance and accompanying context features. The paragraph [0019] amendment is a grammatical correction. The

new paragraph [0020.1] added after paragraph [0020] supports the new figure 4 illustration of resonance features. Paragraph [0021] amendments support the addition of figure 4 and add the missing reference to the term "fuse" ; a key process in the Claims.

Paragraph [0022] and Abstract of Disclosure paragraph [0035] amendments support the principle of resonance.

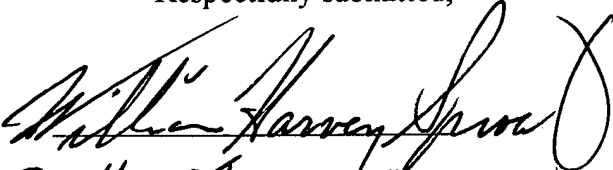
Claims Amendments

Revised Claims paragraphs [0033.1] through [0033.8] are amendments replacing the application document List of Claims to include the principle of **resonance** and to editorially distinguish between:

- i) A multi-element sonic **apparatus** which is adaptable to a wide range of applications, and
- ii) **Methods** of sonic welding, forming, bonding, and substructure modification of both metals and non-metals.

The undersigned applicant respectfully requests the issuance of a Notice of Allowance for this case and stands ready to assist in the amendment process.

Respectfully submitted,


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